In the Claims

Claims 1-135 (Canceled).

Claim 136 (Currently Amended): A method to measure or detect an interaction between components of sample formulations, comprising:

a) preparing an array of samples, wherein:

1) each sample comprises a component-in-common and one or more additional components, each sample varying in the identity of the one or more additional components or varying in the ratio of the volume of component-in-common to the volume of the one or more additional components,

2) the samples are located at separate sites or in separate wells of the array,

3) the array is comprised of at least 1000 different samples, and

4) the array is prepared by an automated ~~robotics~~ system that adds and mixes the components of each sample under software control,

b) testing each sample for a property to generate a data set, and

c) analyzing the data set to measure or detect an interaction between components of the sample formulations, said interaction being increased solubility of the component-in-common.

Claim 137 (Previously Presented): The method of claim 136 wherein the interaction between components of the sample formulations decreases solubility.

Claim 138 (Previously Presented): The method of claim 136 wherein the interaction between components of the sample formulations has a synergistic effect on solubility.

Claim 139 (Previously Presented): The method of claim 136 wherein the component-in-common is an active component.

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Claim 140 (Previously Presented): The method of claim 139 wherein the component-in-common is a pharmaceutical.

Claim 141 (Previously Presented): The method of claim 140 wherein the pharmaceutical component-in-common is selected from the group consisting of:

a) a therapeutic,
b) a prophylactic, and
c) a diagnostic agent.

Claim 142 (Previously Presented): The method of claim 136 wherein the component-in-common is an inactive component.

Claim 143 (Previously Presented): The method of claim 136 wherein the component-in-common is a solid.

Claim 144 (Previously Presented): The method of claim 136 wherein the component-in-common is a liquid.

Claim 145 (Previously Presented): The method of claim 136 wherein the each sample of the array comprises less than 100 μg of the component-in-common.

Claim 146 (Previously Presented): The method of claim 136 wherein the each sample of the array comprises less than 100 ng of the component-in-common.

Claim 147 (Previously Presented): The method of claim 136 wherein each sample of the array has a total volume between 150 and 200 μl.

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Claim 148 (Previously Presented): The method of claim 136 wherein the array is formed by input of the components in solid form.

Claim 149 (Previously Presented): The method of claim 136 wherein the array is formed by input of the components in liquid form.

Claim 150 (Previously Presented): The method of claim 136 wherein the sample testing is performed at a rate greater than or equal to 1000 formulations per day.

Claim 151 (Previously Presented): The method of claim 136 wherein the data set is analyzed to arrive at optimized formulations and interactions.

Claim 152 (Currently Amended): The method of claim 136 wherein the data set is processed through data mining algorithms ~~so as to optimize the ability of scientific personnel~~ to detect complex multi-dimensional interactions between components.

Claim 153 (Currently Amended): The method of claim 136 wherein the data set is processed through data mining algorithms ~~so as to optimize the ability of scientific personnel~~ to detect a lack of interactions between components.

Claim 154 (Currently Amended): The method of claim 136 wherein the data set is processed through data mining algorithms ~~so as to optimize the ability of scientific personnel to conduct~~ to identify samples for future ~~experiments to optimize formulations.~~ formulation experiments.

Claim 155 (Currently Amended): A method to measure or detect a synergistic interaction between pharmaceutical components of sample formulations, comprising:

a) preparing an array of samples, wherein:

1) each sample comprises a pharmaceutical component-in-common, one or more additional pharmaceutical components, and one or more additional excipient

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components, each sample varying in the identity of the additional one or more pharmaceutical and excipient components or varying in the ratio of the volume of pharmaceutical component-in-common to the volume of the additional one or more pharmaceutical and excipient components,

2) the samples are located at separate sites or in separate wells of the array,

3) the array is comprised of at least 1000 different samples, and

4) the array is prepared by an automated ~~roboties~~ system that adds and mixes the components of each sample under the control of software,

b) testing each sample for a property to generate a data set, and

c) analyzing the data set to measure or detect a synergistic interaction between components of the sample formulations, said interaction being increased solubility of the component-in-common.

Claim 156 (Previously Presented): The method of claim 155 wherein the interaction between components of the sample formulations decreases solubility.

Claim 157 (Canceled).

Claim 158 (Previously Presented): The method of claim 155 wherein the pharmaceutical component-in-common is selected from the group consisting of:

a) a therapeutic,

b) a prophylactic, and

c) a diagnostic agent.

Claim 159 (Previously Presented): The method of claim 155 wherein the component-in-common is a solid.

Claim 160 (Previously Presented): The method of claim 155 wherein the component-in-common is a liquid.

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Claim 161 (Previously Presented): The method of claim 155 wherein the each sample of the array comprises less than 100 μg of the component-in-common.

Claim 162 (Previously Presented): The method of claim 155 wherein the each sample of the array comprises less than 100 ng of the component-in-common.

Claim 163 (Previously Presented): The method of claim 155 wherein each sample of the array has a total volume between 150 and 200 μl.

Claim 164 (Previously Presented): The method of claim 155 wherein the array is formed by input of the components in solid form.

Claim 165 (Previously Presented): The method of claim 155 wherein the array is formed by input of the components in liquid form.

Claim 166 (Previously Presented): The method of claim 155 wherein the sample testing is performed at a rate greater than or equal to 1000 formulations per day.

Claim 167 (Previously Presented): The method of claim 155 wherein the data set is analyzed to arrive at optimized formulations and interactions.

Claim 168 (Currently Amended): The method of claim 155 wherein the data set is processed through data mining algorithms ~~so as to optimize the ability of scientific personnel~~ to detect complex multi-dimensional interactions between components.

Claim 169 (Currently Amended): The method of claim 155 wherein the data set is processed through data mining algorithms so as to ~~optimize the ability of scientific personnel to~~ detect a lack of interactions between components.

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Claim 170 (Currently Amended): The method of claim 155 wherein the data set is processed through data mining algorithms so as to identify samples for future formulation experiments~~optimize the ability of scientific personnel to conduct future experiments to optimize formulations~~.

Claim 171 (Currently Amended): The method according to claim 155, wherein ~~said~~ each sample comprises at least three excipients ~~are~~ selected from the group consisting of: acidulents; solubilizing components; absorbents; alkalizing components; anticaking components; antimicrobial components; antioxidants; binders; buffering components; chelating components; coating components; controlled release vehicles; detergents; emollients; emulsifying components; flavoring components; humectants; lubricants; solvents; stabilizing components; tonicity components; binders; fillers; and mixtures thereof.

Claim 172 (Currently Amended): The method according to claim 136, wherein ~~said~~ each sample comprises at least three components~~excipients are~~ selected from the group consisting of: acidulents; solubilizing components; absorbents; alkalizing components; anticaking components; antimicrobial components; antioxidants; binders; buffering components; chelating components; coating components; controlled release vehicles; detergents; emollients; emulsifying components; flavoring components; humectants; lubricants; solvents; stabilizing components; tonicity components; binders; fillers; and mixtures thereof.

Claim 173 (New): The method according to claim 136, wherein said component-in-common is paclitaxel (taxol).

Claim 174 (New): The method according to claim 155, wherein said component-in-common is paclitaxel (taxol).

Claim 175 (New): The method according to claim 136, wherein said array is analyzed using a UV spectrometer.

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Claim 176 (New): The method according to claim 155, wherein said array is analyzed using a UV spectrometer.

Claim 177 (New): The method according to claim 174, wherein the solubility of said component-in-common is analyzed using a UV spectrometer.